



**First session of the
Regional Conference on
Population and Development in
Latin America and the Caribbean**

Montevideo, 12 - 15 August 2013

FOR PARTICIPANTS ONLY

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**ECLAC SUPPORT FOR HOUSING AND POPULATION CENSUSES
IN THE DECADE STARTING IN 2010**



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Full integration of population dynamics into rights-based
sustainable development with equality: key to
the Cairo Programme of Action beyond 2014

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**ECLAC SUPPORT FOR HOUSING AND POPULATION CENSUSES
IN THE DECADE STARTING IN 2010***

* This document is a translation of a Spanish text, prepared by ECLAC, which was not submitted for formal editing.

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I. INTRODUCTION

The aim of this document is to respond to the request contained in the agreements adopted by the ECLAC Ad Hoc Committee on Population and Development at its most recent ordinary session in July 2012,¹ which were ratified at the thirty-fourth session of the Economic Commission for Latin America and the Caribbean (ECLAC) held in San Salvador from 27 to 31 August 2012.² This request called for, *inter alia*, a report on tasks carried out during the 2012-2013 biennium in relation to preparing and conducting the 2010 census round.

The above-mentioned agreements reiterated the importance of member States improving data sources, in particular population censuses, vital statistics and specialized surveys, while also assigning sufficient financial and human resources for this purpose. The agreements also emphasized the importance of developing systems to provide reliable, timely and quality national statistical information that is georeferenced and disaggregated by sex, age and ethnic group for decision-making and for the design, monitoring and evaluation of development policies and programmes, including follow-up to United Nations summits and conferences.

In addition, the secretariat was asked to continue to provide technical assistance to the Working Group on Censuses of the Statistical Conference of the Americas of ECLAC in order to assist countries with the generation, analysis and dissemination of up-to-date census information that is of economic, social and environmental relevance.

In coordination with the Presiding Officers of the Regional Conference on Population and Development in Latin America and the Caribbean, with the support of the United Nations Population Fund (UNFPA), and with due regard for the existing links between population and development, the secretariat was also asked to continue to give priority to the following issues from a gender perspective: determinants and implications of demographic trends; sociodemographic inequalities; child and maternal mortality; sexual and reproductive health; young people; ageing and older persons; indigenous peoples and Afro-descendent populations in Latin America and the Caribbean; internal and international migration; sources of sociodemographic information (population censuses and vital statistics); and human resources training in the fields of demographics and of population and development. The emphasis placed by member States on population censuses in resolutions and agreements comes from the region's strong census tradition, and is reflected in the progress made this decade. Between 2010 and the end of 2013, 31 Latin American and Caribbean countries and territories will have carried out their population and housing censuses.

In response to the recommendations arising out of the 2012 meeting of the ECLAC Ad Hoc Committee on Population and Development and those of the Statistical Conference of the Americas of ECLAC and its Executive Committee relating to preparing and conducting the census round, the Latin American and Caribbean Demographic Centre (CELADE)-Population Division of ECLAC, with the support of UNFPA and the Working Group on Censuses, continued to carry out numerous activities aimed at strengthening countries' capacities in the technical, methodological and operational definition of censuses, as well as in the evaluation, analysis and dissemination of the information obtained.

¹ ECLAC Ad Hoc Committee on Population and Development: Agreements, see [online] www.eclac.cl/celade/noticias/paginas/2/46852/CEPD-Agreements-final.pdf.

² Resolution 670(XXXIV) of the ECLAC Ad Hoc Committee on Population and Development [online] www.eclac.org/pses34/noticias/documentosdetrabajo/2/47912/RESOLUTIONS-ING-final-31AUG-kh.pdf.

Although there can be no clear evaluation of the quality of results until the in-depth evaluations have been carried out, member States have made considerable efforts to achieve high levels of coverage, quality and timeliness in the dissemination of information. Those countries that have made progress in revising projections based on this decade's census show coverage of above 95% – which is a good indicator. In terms of dissemination, the preliminary results from the Latin American censuses were available less than six months after the end of collection, and in some cases definitive results were published seven months after collection. One of the main international recommendations in this area has thus been successfully implemented, that is, that users should be able to consult collected and processed data in a timely manner.

The ease with which users can access information has also been facilitated by technology. The Retrieval of Data for small Areas by Microcomputer (REDATAM) program, a free tool that provides specific technical assistance for such tasks, has enabled statistical offices to make census data available to users in record time, along with a wide range of tabulation options.

The activities carried out over the past year have been very diverse. Some countries are beginning the census-planning process while others are collecting, processing, evaluating, disseminating or analysing the results. This report will provide further details of these activities and the main outcomes and lessons learned.

II. FOLLOW-UP TO RESOLUTION 670(XXXIV): ACTIVITIES

Numerous activities have been pursued in coordination with other United Nations agencies and national and international agencies, with a view to monitoring preparations for the 2010 census round and strengthening countries' capacity to carry out their censuses.

In particular, UNFPA provided technical and financial support through the 2008-2013 UNFPA-CELADE Regional Programme, which aims to strengthen regional capacity to compile and systematize the necessary and sufficient information to produce a sociodemographic profile, taking into account specific subnational, national and subregional characteristics, and to strengthen technical analysis aimed at developing policies, dissemination activities and advocacy. All of the above involves boosting the region's privileged position in accessing and using microdata from censuses and other sources of sociodemographic information. More specifically, the activities of the RLA6U717 project, designed to boost countries' capacity to produce and analyse census data in line with international standards, as well as their use in the design and implementation of programmes and policies, have been directed at the conceptual and methodological definition of questionnaires, the incorporation of the ethnic and gender perspectives, coverage evaluation methodologies, the use of technology in updating census maps, and the development of the REDATAM program to create and process databases.

The UNFPA-ECLAC programmes of work for 2012 and 2013 placed emphasis on the provision of technical assistance to countries with regard to evaluating and analysing the 2010 census round and population projections, using recent censuses to update databases on indigenous and Afro-descendent populations, internal and international migration, population distribution and population ageing, and organizing the annual Intensive Regional Course on Demographic Analysis. The activities planned for the RLA6U717 project in 2013 thus include delivering training workshops on evaluating census quality and analysing the outcome of and main lessons learned during recent census-taking activities.

Activities have also been carried out in cooperation with the Working Group on Censuses of the Statistical Conference of the Americas of ECLAC, whose technical secretariat is CELADE-Population Division of ECLAC. The 2011-2013 programme of work has been led by the Bolivarian Republic of Venezuela and forms part of the 2005-2015 strategic plan of the Statistical Conference of the Americas of ECLAC. Its main goal is to promote and develop initiatives that support countries in the evaluation and analysis of 2010 housing and population censuses through training activities (workshops on evaluating coverage and quality, processing and analysing census information, and formulating population estimates and projections based on the 2010 census round), boosting the exchange of knowledge and experiences among countries (concerning, for example, the use of new technologies in housing and population censuses and data editing procedures), determining how countries tackled their recent censuses in terms of content, methodologies and technologies, and evaluating the experience in the light of the results obtained.

Collaboration has been forthcoming from ECLAC Divisions, according to their areas of expertise, and from various subregional headquarters. These include the subregional headquarters for the Caribbean in Port of Spain, the Programme Planning and Operations Division (DPPO), the Gender Affairs Division, the Statistics Division, the Social Development Division, the Documents and Publications Division and the Conference Services Unit.

A. WORKSHOPS AND EXPERT MEETINGS TO DISCUSS CONCEPTUAL AND METHODOLOGICAL ASPECTS OF CENSUS EVALUATION AND ANALYSIS

CELADE-Population Division of ECLAC has continued to hold workshops and seminars with a view to strengthening national capacities to evaluate census quality and coverage, and to discuss and share experiences while boosting various forms of cooperation on operational aspects of census-taking activities.

In accordance with the stated objectives, material was prepared for each workshop by the Division's own experts or by hired consultants that described the experiences of the region and proposed alternatives for the 2010 census round. This work formed the basis for discussion at each meeting, and was then supplemented by the specific experiences of countries.

- From 11 to 16 June 2012, the Second regional meeting on using census data for demographic evaluation and estimation was held in Santiago to share experiences regarding the process of estimating and evaluating the components of demographic trends, and regarding the analysis of the internal consistency, quality and coverage of census data. The aim was to boost the capacities of professionals and technical staff from national statistical institutes to analyse demographic trends during the census evaluation process. The meeting was attended by 21 people (24% of them women). The conclusions of this meeting, along with those of the 2011 meeting,³ have been compiled with a view to producing a guide to census evaluation, which will be submitted to participating institutional experts for their consideration at the next meeting, planned for the second half of 2013.
- From 23 to 27 July 2012, the Second regional meeting on the capabilities and applications of census data was held in Santiago, targeting national statistical institutes of countries that had already conducted the 2010 round of censuses, and was attended by 19 people (47% of them

³ See [online] www.eclac.cl/cgi-bin/getProd.asp?xml=/celade/agenda/5/44145/P44145.xml&xsl=/celade/tpl/p3f.xsl&base=/celade/tpl/top-bottom_2010.xslt [Spanish only].

women). The aim was to explore the possibilities of using Latin American and Caribbean housing and population censuses to analyse internal and international migration, indigenous and Afro-descendent peoples, housing and housing shortages, metropolitan trends and health based on census variables and other sociodemographic indicators, as well as to generate institutional capacity for research based on census information.

- From 6 to 8 May 2013, the workshop “Use of technology in housing and population censuses” was held in Caracas. As the technical secretariat for the Working Group on Censuses of the Statistical Conference of the Americas of ECLAC, CELADE-Population Division of ECLAC organized this activity in conjunction with the National Statistical Institute of the Bolivarian Republic of Venezuela and the Inter-American Development Bank (IDB). The meeting covered technologies used in recent censuses; solutions adopted during implementation; pros and cons of these solutions; advantages over previous statistical operations that did not use such technologies; the impact of the change from a de facto to a de jure census and of a change in technology from one census to another; combinations of data capture technologies (mobile data capture devices and paper); and the costs of the technologies involved. Participants also discussed the impact of technologies on the modernization of cartography and on the dissemination of census data.

Activities planned for the second half of 2013 include the third regional meeting on using census data for demographic evaluation and estimation, a seminar entitled “The 2010 census round in Latin America: overview and main lessons learned”, and the publication of a handbook on demographic evaluation and estimates—which will be extremely useful for guiding countries and for training staff on this topic.

As mentioned above, a *Guide to demographic evaluation and estimation* is being prepared, to contain a compilation and review of evaluation methodologies for censuses and other demographic information sources. The guide will include documentation based on the experiences of various countries in the region, as well as a proposed index for a census evaluation report.

Preparations are also under way for a handbook on the main changes in the content and length of Latin American censuses in the 1990s, 2000s and 2010s. It will contain a comparative analysis of the length and content of census forms used during the past three decades in Latin American countries. The focus is on a comparative analysis of general characteristics, length and content of the forms used, with special emphasis on any changes occurring during this period. There is a chapter on each country, which refers to both the questions on housing and the household and the questions on people. The final chapter presents some general conclusions arising from the analysis, such as the increased regularity of regional operations, the greater number of de jure censuses, the use of basic and extended questionnaires in more countries, forms that were in keeping with technological advances, more detailed data capture (such as age in three digits), changes in age limits used as a filter for various headings in questionnaires, and a rise in the number of possible responses.

Demand has been growing for professional training on population issues from Latin American and Caribbean governments and from universities and non-governmental organizations. This is reflected in the aforementioned agreements adopted by the 2012 meeting of the ECLAC Ad Hoc Committee on Population and Development, and in the agreements adopted at the sixth session of the Statistical Conference of the Americas of ECLAC, which welcomed the ECLAC initiative to make up for the shortfall in census information management experts by organizing intensive regional courses on

demographic analysis for development, and urged international agencies and organizations to provide full support for obtaining funds for this purpose.

As a result, from 27 August to 14 December 2012, CELADE-Population Division of ECLAC organized a new edition of the Intensive Regional Course on Demographic Analysis, with financial support from the Regional Office of the United Nations Population Fund (UNFPA- LACRO). This activity formed part of the ECLAC-UNFPA programme of work for 2012. The course helped meet regional demand for professionals trained in population matters, from within the government sector in terms of regional, sectoral and global management, production, processing and analysis of statistics, as well as from universities and non-governmental organizations. In terms of its content and approach, the course aimed to provide training in demographic analysis methods and techniques to be used in the study and assessment of population dynamics, the production of demographic input for economic and social management, and the design, evaluation and monitoring of social projects, public policies and interventions. It focused on using census data as the basis for demographic analysis, thereby strengthening regional work carried out as part of the 2010 census round. It is intended for graduate professionals, preferably those with links to agencies that produce statistics or analyse censuses in the region's countries. The course consisted of 475 hours of lessons and practice divided into four main modules. There were 16 participants (38% of them women) from the following 12 countries in the region: Bolivarian Republic of Venezuela (3), Chile (2), Colombia (1), Costa Rica (1), Cuba (1), Dominican Republic (2), Ecuador (1), Guatemala (1), Haiti (1), Honduras (1), Nicaragua (1) and Panama (1).

Students gave very positive feedback on both the academic content and the organization of the course. The most highly rated aspect was the practical usefulness of the course overall and of each module, as well as the positive effect that the course content would have on their daily work. Other highly rated aspects of the course in general were the order of the subjects covered, the bibliography provided, and the coherence between theory and practice. The most problematic aspects were the complexity of some of the course content (especially at the beginning of the course, because of the mixed academic level of students), as well as the short time devoted to each module in such an intensive course.

B. DEVELOPMENT OF REDATAM AND TRAINING WORKSHOPS ON ITS USE

Support for the Latin America and Caribbean region and dissemination in other regions

In order to continue supporting national institutions in their use of census information, CELADE-Population Division of ECLAC organized several training workshops on using the sociodemographic information generated by each country, which were held in the context of technical cooperation with countries and at their request.

During the period 2012-2013, a major part of the Division's work in the area of sociodemographic information systems and processing tools was the organization of 16 national, subregional and regional workshops in Argentina, Colombia, Chile, Fiji, Panama, Thailand, Trinidad and Tobago and Uruguay. The aim of these training activities, which were financially supported by UNFPA, was to build professional capacity among staff at national statistical offices, specifically in relation to creating databases and sociodemographic indicators, processing, using and analysing census data, and developing Web applications for information dissemination using the Redatam WebServer platform. A total of 281 statisticians and demographers from Latin America and the Caribbean and other regions, principally Asia, had the opportunity to strengthen their capacities in the use of REDATAM, in particular

with regard to processing, analysing and disseminating information from the 2010 round of housing and population censuses.

As a result of these efforts, another country in a different region, Vanuatu, uploaded the REDATAM application to process its 2000 housing and population census.⁴ In Africa, Ethiopia published the REDATAM application online to process censuses and surveys,⁵ while Niger published the REDATAM application to process the 2001 and 2011 housing and population censuses.⁶

Technical assistance was also provided to departmental governments in Uruguay (municipalities) and to public officials for the processing and analysis of the 2011 housing and population census. This assistance took the form of four workshops, as well as technical support provided to the National Statistical Institute that led to use of the application for disseminating the 2011 census online.⁷ Guatemala published a Web application for processing its 2002 housing and population census online.⁸ Similarly, Costa Rica published an application for searching health data output using the REDATAM WebServer.⁹ A representative of Panama received training at CELADE-Population Division of ECLAC that will enable the country to update its Web application for the dissemination of its 2000 housing and population census.

Two workshops are delivered by CELADE-Population Division of ECLAC every six months at its headquarters in Santiago, using REDATAM, which all of the region's countries are invited to attend. The workshop held in the first half of 2013 focused on the statistical processing and analysis of information from housing and population censuses, and on the production of sociodemographic indicators in various thematic areas: estimating the education and housing shortfall; sociodemographic profiling of specific population groups (older persons, young people and adolescents, indigenous population); migration; and estimation of unmet basic needs (UBN). The other workshop, held in the second half of 2012, covered the creation and migration of databases in REDATAM format, and the development of applications to disseminate sociodemographic information using the REDATAM WebServer platform. This workshop will be repeated in the second half of 2013.

Besides the annual publication of the newsletter *Redatam Informa* [Spanish only],¹⁰ during the period 2012-2013 CELADE-Population Division of ECLAC continued to provide technical cooperation services to member States from ECLAC headquarters as well as from within countries themselves. Argentina, the Bolivarian Republic of Venezuela, Peru and Uruguay all benefited from assistance missions to create databases and develop Web applications using REDATAM. The Dominican Republic received expert support from CELADE-Population Division of ECLAC in creating a database for its 2000 housing and population census and in updating the dissemination application using the REDATAM platform. CELADE-Population Division of ECLAC also cooperated with the headquarters of UNFPA in Asia in the organization of two subregional REDATAM workshops—one for Asia and one for the Asia-Pacific region—aimed at strengthening national capacities in relation to the management and dissemination of census data.

⁴ See [online] www.vnsoredatam.gov.vu/cgibin/RpWebEngine.exe/PortalAction?&BASE=vuvccensus09.

⁵ See [online] <http://213.55.92.110/cgibin/RpWebEngine.exe/PortalAction>.

⁶ See [online] <http://imis.ins.ne/cgibin/RpWebEngine.exe/PortalAction?&BASE=RGPHP2011>.

⁷ See [online] www.redatam.org/redury.

⁸ See [online] <http://200.30.146.107/cgibin/RpWebEngine.exe/PortalAction?&BASE=CPVGT2002>.

⁹ See [online] <http://ccssvdcapp03.ccss.sa.cr/cgibin/RpWebEngine.exe/PortalAction>.

¹⁰ Vol. 18, December 2012. See [online] www.eclac.cl/cgi-bin/getProd.asp?xml=/celade/noticias/documentosdetrabajo/5/49025/P49025.xml&xsl=/celade/tpl/p38f.xsl&base=/redatam/tpl/top-bottom.xslt.

Development of REDATAM

Improvements to REDATAM include the ongoing development of the next generation of the program, REDATAM 7. This represents a major technological leap forward and involves adaptation to new IT developments, operating systems and other software (CsPro, DevInfo). So far, a Beta version of the Red7 Create module has been developed, which has already been used with satisfactory results in several countries (Argentina, Brazil, Dominican Republic, Indonesia, Paraguay and Uruguay) to create REDATAM databases using recent censuses. This has taken less time than with REDATAM+SP, as large volumes of information can be processed in a single operation. In the second half of 2013, development is expected to continue on the REDATAM 7 processing engine, meaning that a new and improved tool for processing and disseminating information using REDATAM will be available.

At the same time, owing to the many requests for improvements and corrections to the current version, REDATAM+SP, which is losing relevance because of its obsolete development platform, the modules R+SP Process, R+SP Gini, R+SP BeforeAfter, R+SP EIM, R+SP EIF, R+SP xPlan and R+SP WebServer are being migrated to the REDATAM 7 development platform using the Redatam+SP engine. This development also makes it possible to introduce some improvements to REDATAM 7 in order to test its functionality.

C. PARTICIPATION IN CENSUS WORKSHOPS AND MEETINGS

During the reference period covered by this report, several meetings organized by other institutions were attended. These organizations included the United Nations Commission on Population and Development, the United Nations Statistical Commission, the sixth meeting of the Statistical Conference of the Americas of ECLAC and meetings of its Executive Committee. Meetings on censuses were also attended when these were scheduled during meetings or conferences of demographics and population associations in the countries in the region.

As part of the eleventh and twelfth meetings of the Executive Committee of the Statistical Conference of the Americas of ECLAC, held respectively in Quito (from 2 to 4 July 2012) and Pucón, Chile (from 24 to 26 April 2013), CELADE-Population Division of ECLAC also provided support for the drafting and presentation of the activity reports of the Working Group on Censuses,¹¹ as well as the formulation of the programme of work for the next biennium.

D. TECHNICAL ASSISTANCE

The CELADE technical team, with UNFPA support, has carried out intensive technical assistance activities in order to strengthen the capacity of the region's countries to conduct the 2010 census round. With its own resources plus input from UNFPA and other agencies, in 2012 the Division delivered almost 1800 man days of technical assistance to the region's countries. Technical assistance missions were almost as intensively implemented (49%) as technical assistance from headquarters (51%) —which was either provided via e-mail and teleconferencing or through visits to CELADE-Population Division of ECLAC by national experts. Censuses and population projections were one of the main issues, with a

¹¹ See [online] www.cepal.org/deype/noticias/noticias/4/49614/CE12-GT-Censos-abril2013.pdf [Spanish only].

fifth of all days given over to this topic (closely followed by issues related to the ethnic perspective). International migration, REDATAM and training each represented 10% of the technical assistance provided. One of the main examples of technical assistance in terms of training was the 2012 Intensive Regional Course on Demographic Analysis. Other issues in order of time dedicated to them included ageing (7%), transfers, databases and population and territory (5% each). Support for the region's population networks and associations continued to rise and accounted for 4% of all days.

Another important aspect of technical support is delivered through various seminars, workshops and meetings organized by CELADE-Population Division of ECLAC, mainly at headquarters, which are attended by representatives from national statistical offices. During the reference period for this report, a total of 96 regional participants attended four workshops or courses related to emerging aspects of the 2010 round of censuses. These workshops and courses were as follows: (i) Using census data for demographic evaluation and estimation (2012); (ii) Capabilities and applications of census data (2012); (iii) Intensive Regional Course on Demographic Analysis (2012); and (iv) Use of technology in housing and population censuses. All of the region's countries have benefited from these activities, either through direct participation or the recommendations that emerge from the workshops.

III. RESULTS AND IMPACT

Cooperation among countries with regard to preparing and conducting the 2010 round of censuses has been considerable, as has the support CELADE-Population Division of ECLAC has received from other ECLAC Divisions and subregional, regional and international agencies, including UNFPA and the United Nations Department of Economic and Social Affairs (DESA). The region's countries have also played a key role in this coordination through the Statistical Conference of the Americas of ECLAC.

As mentioned in the previous report, each country's experiences regarding these issues and the conclusions of the workshops held between 2008 and 2010 were used to draft a preliminary set of recommendations that were submitted to statistical institutions. An updated version of these recommendations included the outcomes of discussions that took place as part of the follow-up on progress in the preparations for the 2010 round of censuses during meetings of the Statistical Conference of the Americas of ECLAC or its Executive Committee attended by directors of statistical institutes and often census directors. The texts resulting from this process were compiled in the document *Recomendaciones para los censos de la década de 2010 en América Latina* [Spanish only], published as No. 72 of the ECLAC *Manuales* series (LC/L.3364-P) in August 2011.¹² The following three handbooks were also produced:

- A handbook on intercensal population and housing estimates, *Conteo intercensal de población y vivienda* [Spanish only], published as No. 67 of the ECLAC *Manuales* series (LC/L.3301-P) in March 2011,¹³ which reviews these experiences and supports countries that are planning to carry out this activity again.
- A guide to preparing census projects, *Guía para la elaboración de un proyecto censal* [Spanish only], published as No. 70 of the ECLAC *Manuales* series (LC/L.3324-P) in April

¹² See [online] www.eclac.org/publicaciones/xml/3/45013/L3364e.pdf.

¹³ See[online] www.eclac.org/publicaciones/xml/2/43922/lcl3301-P.pdf.

2011,¹⁴ which describes the main factors to consider for the methodological, conceptual, operational and financial design of a census, and will serve as a guide for professionals and technical staff in national offices when they request approval and funding from their respective government authorities.

- A guide to ensuring the quality of census data, *Guía para asegurar la calidad de los datos censales* [Spanish only], published as No. 74 of the ECLAC *Manuales* series (LC/L.3431-P) in December 2011,¹⁵ which identifies the stages, activities and outputs that should be monitored during the different phases of a housing and population census, and proposes indicators for quality assessment and monitoring.

The usefulness of these handbooks and the documentation produced regarding the 2010 census round in general has been noted in the various analyses and evaluations of census processes. In addition, insofar as the methodologies and concepts have been adopted by most countries, data is now comparable, thus facilitating regional studies using standardized techniques.

A. CENSUS INFORMATION: ANALYSIS OF ITS CONSISTENCY, QUALITY AND COVERAGE

As demonstrated in previous reports, between 2008 and 2010 CELADE activities focused on census preparation and the definition of questionnaire content. From 2011, the emphasis has been on information use, data exploitation, and results evaluation and dissemination. With this in mind, workshops have been organized on methodologies for estimating and evaluating the coverage and quality of census data.

As stated in the handbooks guiding census project preparation and census quality control¹⁶ prepared by CELADE-Population Division of ECLAC with UNFPA financial support, census directors must pay particular attention to quality control and coverage during the preparatory phase, and establish processes to carry out checks and document them, because mistakes are always possible despite efforts to improve data collection. For the same reason, once data have been collected, the procedure to evaluate data coverage and quality is another key task —so as to identify the potential limitations that users may face.

The aim of the meetings on using census data for demographic evaluation and estimation has been to boost the capacities of professionals and technical staff in national statistical offices with regard to demographic trends analysis and the census evaluation process. The meetings have presented the experiences of the countries in the region in relation to estimating and evaluating the components of demographic trends, and analysing the internal consistency, quality and coverage of census data. The emphasis has been placed on two census evaluation methods: direct methods in the field, and indirect, desk-based methods whereby results are compared with other information sources and internal consistency among censuses is assessed (census reconciliation). During the two meetings on this subject, held in 2011 and 2012, 13 of the 20 Latin American countries had already carried out their census and were in the evaluation process. This made it possible to work with recent problems and data that the experts were familiar with.

¹⁴ See [online] www.eclac.org/publicaciones/xml/4/43924/lcl3324_P-1.pdf.

¹⁵ See [online] www.eclac.org/publicaciones/xml/2/45612/manuales74.pdf.

¹⁶ *Guía para la elaboración de un proyecto censal* and *Guía para asegurar la calidad de los datos censales*. For more details about these publications, see previous section.

The content of the meetings included theoretical and practical sessions on topics such as: (a) inconsistency correction methodology; (b) types of error in demographic information sources; (c) analysis of the population's age and sex structure; (d) analysis of overall mortality; (e) analysis of childhood mortality; (f) analysis of fertility; (g) analysis of international migration estimates; (h) analysis of demographic reconciliation and its results; (i) coverage analysis; and (j) dissemination of coverage results.

Participants highlighted the importance of such workshops. The exchanges are extremely productive and the feedback provided can be used to make improvements to censuses and surveys conducted in each country in the future, taking into consideration national experiences and the recommendations of the United Nations and CELADE-Population Division of ECLAC. Delegates stressed the importance of a good census plan and continuous follow-up during the various stages of a census to reduce coverage and content errors, bring down the census omission rate, and create validation codes for age and sex—all of which ensure the quality of this information, which will be used to formulate, implement and evaluate public policies on health, transport, services and so forth. Those who attended also emphasized how countries had used and adapted to international recommendations to significantly improve future censuses, based on the central idea of proper training for field staff, together with a plan for follow-up and checks to catch errors that may arise in the field. It was seen as vital to provide users with information on the results of quality evaluation by publishing technical reports detailing the procedures used, corrections made and corresponding adjustment factors, thereby enabling them to decide whether or not to use the coverage indicators.

In terms of the overall content, the individual sessions and the methodology used, the workshop was highly appreciated by participants. The only negative point raised was the limited amount of time dedicated to each topic, and a recommendation was made in this regard. Participants also recommended strengthening training for those responsible for planning censuses, drafting the census questionnaire, analysing census data and disseminating and using census information.

B. ANALYTICAL POTENTIAL OF CENSUSES

The vast amount of information collected in population and housing censuses (due to the number of variables involved and the fact that all population and housing data are captured) means that certain analyses can be carried out that are not possible with other information sources. Census-taking is thus vital to the design, implementation, monitoring and evaluation of public policies at the local, national and regional level (as well as for specific population groups).

As stated in the United Nations *Principles and Recommendations for Population and Housing Censuses*,¹⁷ the population census, by providing comparable basic statistics for a country as a whole and for each administrative unit, locality and small areas therein, can make an important contribution to the overall planning process and the management of national affairs. Census data also provide important baseline data for managing and evaluating programme activities across a broad range of sectoral applications, and for monitoring overall development progress, as well as for the assessment of good

¹⁷ United Nations, *Principles and Recommendations for Population and Housing Censuses*, Revision 2 (ST/ESA/STAT/SER.M/67/Rev.2), Department of Economic and Social Affairs, Statistical Division, 2008. Paragraph 1.23. Plans for data processing (paragraphs 1.201 to 1.205) and Plans for census outputs and dissemination (paragraphs 1.206 to 1.209).

governance by civil society groups. According to the United Nations, a census is not complete until the information collected is made available to potential users in a form suited to their needs.

While one of the main criticisms levelled at censuses is that they are not used to their full potential, what is certain is that the situation has changed considerably with access to new technologies. The 2000 round of censuses represented a major leap forward in the dissemination of census information at the regional level, with 14 Latin American countries and 4 Caribbean countries using the REDATAM+SP¹⁸ WebServer developed by CELADE-Population Division of ECLAC to make available to users the microdata from this census round, previous censuses and from population and housing surveys. During the intercensal period, work continued on tools that integrate sociodemographic and geographical information, in other words the ability to use cartography to express the link between sociodemographic phenomena and territory. In this context, the 2010 round of censuses have been more widely disseminated. For instance, Argentina, the Bolivarian Republic of Venezuela, Costa Rica, the Dominican Republic, Ecuador, Panama and Saint Lucia are using the REDATAM WebServer platform for online dissemination, and work is underway with Aruba, Belize, Uruguay and Trinidad and Tobago to enable them to do likewise. Although Brazil, Mexico and Uruguay do not use REDATAM for data dissemination, they do use other formats.

By the end of 2013, 13 Latin American countries will have carried out the 2010 census round, and another three will do so in 2014. Several countries have already published their census data online, with many tabulation possibilities. CELADE-Population Division of ECLAC, with technical and financial support from UNFPA and the Working Group on Censuses, ran two workshops whose purpose was to propose methodologies and approaches for examining issues arising from recent censuses, to share experiences with statistical offices, and to boost the analysis and use of census information so as to better support the design, implementation and monitoring of public policies.

The aim was to explore the possibilities of using Latin American housing and population censuses to analyse internal and international migration, indigenous and Afro-descendent peoples, housing and housing shortages, metropolitan trends and health using census variables and other sociodemographic indicators, as well as to generate institutional capacities for research based on census information.

The objectives and topics covered were as follows:

- Use of REDATAM to generate indicators. This is a practical module in which indicators are generated for subsequent use in other areas, some of them common themes. It includes: (i) description and use of the REDATAM+SP commands, (ii) defining variables to generate indicators such as counting number of households per dwelling, determining overcrowding, and obtaining masculinity indices and sociodemographic characteristics in specific population groups, and (iii) review and practice of what can be done with online census databases.
- Internal migration. Explaining and applying procedures and techniques for measuring and analysing internal migration, as well as estimating its impact on areas of origin and destination; applying the procedures and techniques used to measure and analyse internal migration to census data and microdata to obtain estimates and indicators of internal migration and spatial population distribution.

¹⁸ www.eclac.org/redatam/default.asp.

- Ethnic perspective. Presenting the conceptual and methodological factors involved in using censuses to identify ethnic group, as well as the scope and limitations of census information for quantifying indigenous and Afro-descendent peoples and obtaining demographic and socioeconomic indicators. Working on the interpretation and use of census data as a contribution to policies and programmes, with due consideration for the various territorial contexts, and taking account of the ethnic, gender and generational perspective. Presenting the databank on indigenous and Afro-descendent populations in Latin America and the Caribbean (PIAALC).
- Using census variables to analyse health and social protection. Learning and applying indirect methods for estimating mortality and fertility using census information. Analysing levels, trends and differentials in childhood mortality and fertility based on censuses. Deepening the analysis of adolescent fertility as an indicator of reproductive health. Determining disability rates by comparing the different approaches used in recent censuses. Identifying the regions with the highest rates by type of disability and the most severely affected population groups. Analysing population ageing, the sociodemographic characteristics of older persons and other indicators of their living conditions. Identifying social protection or rights protection coverage via questions on, for example, civil registration, identity documents, health cards, and whether contributions are made to or benefits received from a pension system.
- Metropolitan analysis and housing. Introducing the main concepts of housing analysis based on census data. Examining background information on methodologies and real case studies from various Latin American countries. Explaining indicators used to quantify and analyse housing shortages. Providing training in applying methodologies for calculating housing shortages based on processing census microdata, and methodologies for identifying, quantifying and describing precarious settlements. Introducing the topic of metropolitan structure and its current forms, while teaching how to use censuses to study and design policies on selected metropolitan issues such as suburban sprawl, restoring town centres, incorporating migrants and residential segregation.
- International migration. Presenting concepts, sources and results of estimates of international migration, with special emphasis on processes used in censuses. Carrying out exercises, using selected cases, on managing the information gathered and on microdata processing in various Latin American countries. Introducing concepts such as levels and trends, stocks and flows as indicators that can be generated by national censuses, surveys and administrative records.

Participants highlighted three fundamental elements of these workshops: the promotion of data analysis (identifying quality issues), the provision of analytical tools, and the promotion of access to census data within countries.

The topics of both workshops were well received by participants representing national statistical institutes and other bodies. For those countries that had already carried out their censuses, they provided a general overview of aspects to consider when it came to exploiting census data. For those countries that had yet to carry out their censuses, they would be a useful resource to draw on when they had to collect, process and analyse census data. For participants from planning offices, health ministries or for census information users in general, these workshops would enable them to better understand resulting indicators for proper public policy planning.

The individual sessions, the methodology used and the overall content of these workshops were highly appreciated by participants, as in the case of the workshops on census evaluation. The fact that there was limited time available to look at each topic was again the negative point raised.

C. REDATAM IN LATIN AMERICA AND THE CARIBBEAN AND OTHER REGIONS

The development of REDATAM and ongoing training activities in the form of various workshops have significantly boosted the dissemination of countries' sociodemographic and statistical information, through increased exploitation of census data and its use in public policy, as well as access through portals on the websites of national statistical institutes. In all the countries of the region, the most recent censuses, older censuses and statistical data are currently available for processing online (mostly using the REDATAM platform). Argentina, the Bolivarian Republic of Venezuela, Costa Rica, Ecuador, Panama and Saint Lucia have already used the REDATAM WebServer to develop an application for disseminating the data from their most recent censuses. Aruba, Belize, Trinidad and Tobago and Uruguay will shortly be uploading their applications.

Other government agencies have also developed applications to disseminate their data online, which will enable users to carry out their own processing and tabulations. Chile had already provided online access to the entire series of the Ministry of Social Development's National Socioeconomic Survey (CASEN) and has updated it with its most recent survey from 2011. It also created the Social Observatory, the system of youth indicators from the National Youth Institute (INJUV), and the Department of Labour's 2011 Labour Survey (ENCLA). In Costa Rica, the Costa Rican Social Security Fund (CCSS) continues to update the online processing of its databases using the REDATAM WebServer. The National Statistical Office of the Dominican Republic uses REDATAM as the platform for its database of census, survey and administrative records microdata (BADECER), which is available on its website. In the Bolivarian Republic of Venezuela, the database for cities (bdpCiudades) is being distributed to pilot cities. Based on REDATAM, this system combines sociodemographic information with economic and environmental statistics. This increases the number of users and people requesting social and statistical information who do not have a statistical or data-processing background. Access through REDATAM has thus facilitated their analysis. In addition, the National Statistical Institute of the Bolivarian Republic of Venezuela implemented an online system of checks during the capture period for its 2011 census, using the REDATAM WebServer. The system generated demographic indicators that can be compared with the same indicators for the same areas from previous censuses, making it easier to identify areas requiring review or re-examination. The same system was used to collect information for Paraguay's 2012 census.

Other regions are also improving the accessibility of sociodemographic information in order to extend its scope to users who are not experts in statistical processing and analysis. At the recent Needs Assessment Conference on Census Analysis (NACCA), organized by UNFPA in 2011 in Indonesia, emphasis was placed on using census information for creating poverty maps, and for analysing violence and gender differences, vulnerability and poverty. The National Office of Statistics of Indonesia showed the audience how quickly REDATAM can process the 2010 census by generating a table with over 237 million records in under two minutes. This is currently the largest database that can be processed using REDATAM. In conjunction with the Statistical Institute for Asia and the Pacific (SIAP) of the Economic and Social Commission for Asia and the Pacific (ESCAP), various REDATAM training sessions have also been organized as part of the annual statistical analysis courses delivered by the Institute. This has had a major regional impact, and has resulted in new requests for technical assistance and training in that region.

REDATAM has thus consolidated its position as the right tool for accessing large sociodemographic databases and has promoted cooperation among specialists on various continents, many of whom have built a practice community that uses Facebook and Twitter to further its collaboration. The support of UNFPA, the Inter-American Development Bank (IDB), the International Development Research Centre (IDRC) and various other organizations has been essential to the continuity of and progress made regarding this tool.

D. OTHER GENERAL RESULTS

Thanks to the experience gained during the 2012 Intensive Regional Course on Demographic Analysis, and the suggestions made by participants, the course is being modified and updated to better meet the needs of the region.

On another matter, several countries are planning their next intercensal survey. This will address one of the issues that arises with an intercensal period of 10 years —the problem of outdated figures. Data will be collected on population volume, age and sex and variables associated with its spatial distribution, all of which is valuable for revising projections. These countries will also have to maintain a technical team trained in these matters, as well as in assessing changes in cartography and the spatial distribution of the population, which will provide them with a better foundation for the 2020 census round.

Annex

LIST OF PUBLICATIONS PREPARED BETWEEN JUNE 2012 AND AUGUST 2013

No.	Title	Description and symbol	Date
1	<i>Redatam Informa (Vol. 18)</i>	LC/L.3570	December 2012
2	<i>¿Es recomendable preguntar en el censo acerca de la sobrevivencia del último hijo nacido vivo?</i> Magda Ruiz, Andreína Duarte and Sebastián Carrasco	<i>Notas de Población No. 95</i> (in publication)	2013

Note: All documents are available on the website of the Latin American and Caribbean Demographic Centre (CELADE)-ECLAC Population Division, [online] www.eclac.org/celade/censos2010.



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